CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2007-_____
FOR
JAMESTOWN MINE TRUST I, THROUGH ITS TRUSTEE
COUNTY OF TUOLUMNE
ROBERT CAMERON
GARY WILSON
CLOSURE OF JAMESTOWN MINE
TUOLUMNE COUNTY

TENTATIVE

Compliance with this Monitoring and Reporting Program, and with the companion Standard Provisions and Reporting Requirements, is ordered by Waste Discharge Requirements (WDRs) Order No. _____. Failure to comply with this Program, or with the Standard Provisions and Reporting Requirements dated September 2003, constitutes noncompliance with the WDRs and with the Water Code, which can result in the imposition of civil monetary liability.

A. REPORTING

The Discharger shall report monitoring data and information required in this Monitoring and Reporting Program as a part of the normal facility monitoring report required under Monitoring and Reporting Program No. _____. Monitoring Reports shall conform to the reporting requirements outlined in the Standard Provisions and Reporting Requirements. Reports which do not comply with the required format will be **REJECTED** and the Discharger shall be deemed to be in noncompliance with the WDRs. In reporting the monitoring data required by this program, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. The data shall be summarized in such a manner so as to illustrate clearly the compliance with waste discharge requirements or the lack thereof. Historical and current monitoring data shall be graphed at least once annually. Graphs for the same constituent shall be plotted at the same scale to facilitate visual comparison of monitoring data. A short discussion of the monitoring results, including notations of any water quality violations shall precede the tabular summaries. Data shall also be submitted annually in a digital format acceptable to the Executive Officer

Method detection limits and practical quantitation limits shall be reported. All peaks shall be reported, including those which cannot be quantified and/or specifically identified. Field and laboratory tests shall be reported in the quarterly monitoring reports. The results of any monitoring done more frequently than required at the locations specified herein shall be reported to the Board.

B. REQUIRED MONITORING REPORTS AND SUBMITTAL DATES

1. Quarterly/Semiannual Monitoring Reports

All Quarterly and Semiannual monitoring reports shall include all water quality data and observations collected during the reporting period and submitted per the **Reporting Due Dates** in Section B.3 of this Monitoring and Reporting Program. At a minimum the sampling and data collection in Tables 1 and 2 of this Monitoring and Reporting Program, Standard Provisions and Reporting Requirements (2003), and Waste Discharge Requirements shall be reported.

2. Annual Monitoring Summary Report

The Discharger shall submit an Annual Monitoring Summary Report to the Board covering the previous monitoring year. The annual report shall contain the information specified in Standard Provisions and Reporting Requirements (2003), Section VIII.B. of the "*Reports to be Filed with the Board*." The annual report may be submitted with the final quarterly or semi-annual report for the year.

3. Monitoring Report Submittal Dates

Report Type	Data Collection Frequency	Reporting Period	Report Date Due
Water Quality Protection Standard	Use all previously collected data.	Complete monitoring record	When Requested
Quarterly*	Monthly, Quarterly	1 January – 31 March 1 April – 30 June 1 July – 30 September 1 October – 31 December	**30 April** **31 July** **31 October** **31 January**
Annual Monitoring Summary	All previous data collected during the year	1 January – 31 December	31 January of the following year.
Facility Monitoring	Annually and after Major Storm Events	1 May – 30 September Repairs completed by 31 October	15 November

* Quarterly Reports shall include Waste Discharge Monitoring (Section D.1.), Surface Impoundment & TMF Drain System Monitoring (Section D.2.), and Groundwater Monitoring (Section D.3.)

C. WATER QUALITY PROTECTION STANDARD AND COMPLIANCE PERIOD

1. Water Quality Protection Standard Report

Jamestown Mine site contains several known and suspected releases to groundwater and Phase I of the Settlement Agreement specifies an investigation of known and possible releases. Water Quality Protection Standards have previously been established for the Jamestown Mine and a revised Water Quality Protection Standard Report is not required at this time. The Discharger shall prepare a revised Water Quality Protection Standard Report upon completion of the Phase I investigation.

For each waste management unit (Unit), the Water Quality Protection Standard shall consist of all constituents of concern, the concentration limit for each constituent of concern, the point of compliance, and all water quality monitoring points.

The Water Quality Protection Standard for naturally occurring waste constituents consists of the constituents of concern, the concentration limits, and the point of compliance and all monitoring points. The Water Quality Protection Standard, or any modification thereto, for each monitored medium shall be submitted in a report when requested.

The report shall:

a. Identify **all distinct bodies of surface and ground water** that could be affected in the event of a release from a Unit or portion of a Unit. This list shall include at least the uppermost aquifer and any permanent or ephemeral zones of perched groundwater underlying the facility.

b. Include a map showing the monitoring points and background monitoring points for the surface water monitoring program and groundwater monitoring program. The map shall include the point of compliance in accordance with §20405 of Title 27.

c. Evaluate the perennial direction(s) of groundwater movement within the uppermost groundwater zone(s).

If subsequent sampling of the background monitoring point(s) indicates significant water quality changes due to either seasonal fluctuations or other reasons unrelated to waste management activities at the site, the Discharger or the Regional Water Board staff may request modification of the Water Quality

Protection Standard.

2. Constituents of Concern and Monitoring Parameters

The constituents of concern include all the waste constituents, their reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the Unit. Monitoring parameters are those constituents of concern that provide a reliable indication of a release from a Unit. The monitoring parameters for all Units are those listed in Tables 1 through 3 for the specified monitored medium.

3. Concentration Limits

For a naturally occurring constituent of concern, the concentration limit (or tolerance limit) for each constituent of concern shall be determined as follows:

a. By calculation in accordance with a statistical method pursuant to §20415 of Title 27; or

b. By an approved alternate statistical method in accordance with §20415 of Title 27.

Tolerance Limits have previously been established for those groundwater monitoring points with sufficient data. A table with the established Tolerance Limits is attached at the end of this MRP.

D. MONITORING

The Discharger shall comply with the monitoring program provisions of Title 27, in accordance with Monitoring Specifications in Standard Provisions and Reporting Requirements (2003). All monitoring shall be conducted in accordance with an approved Sample Collection and Analysis Plan, which includes quality assurance/quality control standards.

Method detection limits and practical quantitation limits shall be reported. All peaks shall be reported, including those which cannot be quantified and/or specifically identified.

The Discharger may use approved alternative analytical test methods, including new USEPA approved methods, provided the methods have method detection limits equal to or lower than the analytical methods specified in this Monitoring and Reporting Program.

1. Waste Discharge Monitoring

The Discharger shall monitor the quantity of water discharged from the Leachate Collection and Recovery System (LCRS), spine drains and tailings dam filter-drainage network to the Process Water Retention Pond (PWRP). The data shall be collected monthly and reported in gallons per month. For the Harvard Mine Pit the discharge to the pit should be analyzed per the parameters in Table 1. The remaining capacity parameter shall be the area in the pit between the water level and 1320 feet msl.

Table 1 - Waste Discharge Monitoring

Parameters	Units	Frequency
Quantity Discharged	gallons	Monthly
Remaining Capacity	acre-feet	Monthly
Water Level	Feet (msl)	Monthly

2. Harvard Pit, PWRP and TMF Drain System Water Quality Monitoring

On a quarterly basis, the discharger shall monitor water quality at the following: Harvard Mine Pit, PWRP, Leachate Collection and Recovery System (TMFLCRS), Groundwater Spine Drain (TMFGWSP), Embankment Drain (TMFFEMB), East Outlet Pipe Drain (TMFOPE), West Outlet Pipe Drain (TMFOPW), PWRP Leachate Collection and Recovery System (PWRPLCRS) and PWRP Groundwater Spine Drain (PWRPGRND). Samples from the PWRP and the Harvard Mine Pit shall be collected in a convenient location at least 50 feet from an influent structure. Results shall be reported in the normal Quarterly Monitoring Reports. Samples shall be analyzed for the following:

Table 2 - Harvard Pit, PWRP and TMF Drain System Water Quality Monitoring

Parameters	Units	Frequency
Field Parameter		
Temperature	^{o}C	Quarterly
Specific Conductance	µmhos/cm	Quarterly
pH	pH	Quarterly
Monitoring Parameters		
Total Dissolved Solids	mg/L	Quarterly
Calcium	mg/L	Quarterly
Magnesium	mg/L	Quarterly
Sodium	mg/L	Quarterly
Potassium	mg/L	Quarterly
Chloride	mg/L	Quarterly
Sulfate	mg/L	Quarterly
Bicarbonate	mg/L	Quarterly
Carbonate	mg/L	Quarterly
Nitrate	mg/L	Quarterly
Ammonia	mg/L	Quarterly
Arsenic	ug/L	Quarterly
Selenium	ug/L	Quarterly
Manganese	mg/L	Quarterly
Total Organic Carbon	mg/L	Quarterly

3. Groundwater Monitoring

The Discharger shall operate and maintain a groundwater evaluation monitoring system that complies with the applicable provisions of §20415 and §20425 of Title 27 in accordance with an Evaluation Monitoring Program. The Discharger shall collect, preserve, and transport groundwater samples in accordance with the approved Sample Collection and Analysis Plan. The provisions in this MRP are intended for long term monitoring and in no way change or limit the scope of work for the Phase I investigation.

The groundwater monitoring system shall consist of background wells RSMW-5A, TDMW-7 and -22; and monitor wells RSMW-6, -7, -8, -9A, TDMW-3, -4, -6, -9, -12, -14, -15, -16, -18, and –19. Several additional monitor wells have been installed as part of the Phase I groundwater investigation. After the initial monitoring data is submitted with the groundwater investigation this Monitoring and Reporting Program will be updated if appropriate.

The Discharger shall determine the groundwater flow rate and direction in the uppermost aquifer and in any zones of perched water and in any additional zone of saturation monitored pursuant to this Monitoring and Reporting Program. Quarterly water levels potentiometric surface maps shall be reported in the Quarterly Reports. Hydrographs of each well shall be submitted showing the elevation of groundwater with respect to the elevations of the top and bottom of the screened interval and the elevation of the pump intake. Hydrographs of each well shall be prepared quarterly and submitted in the Annual Monitoring Summary Report.

Groundwater samples shall be collected from the downgradient wells, background wells, and any additional monitoring wells added as part of the Phase I investigation. Samples shall be collected and reported quarterly. Samples will be analyzed for the following:

Table 3 - Groundwater Monitoring

Parameters	Units	Frequency
Field Parameter		
Temperature	^{o}C	Quarterly
Specific Conductance	µmhos/cm	Quarterly
pH	pH	Quarterly
Monitoring Parameters		
Total Dissolved Solids	mg/L	Quarterly
Calcium	mg/L	Quarterly
Magnesium	mg/L	Quarterly
Sodium	mg/L	Quarterly
Potassium	mg/L	Quarterly
Chloride	mg/L	Quarterly
Sulfate	mg/L	Quarterly
Bicarbonate	mg/L	Quarterly
Carbonate	mg/L	Quarterly
Nitrate	mg/L	Quarterly
Ammonia	mg/L	Quarterly
Arsenic	ug/L	Quarterly
Selenium	ug/L	Quarterly
Manganese	mg/L	Quarterly
Total Organic Carbon	mg/L	Quarterly

4. Facility Monitoring

a. Annual Facility Inspection

Annually, prior to the anticipated rainy season, but no later than **30 September**, the Discharger shall conduct an inspection of the facility. The inspection shall assess damage to the drainage control system, groundwater monitoring equipment (including wells, etc.), and shall include the Standard Observations contained in WDR Order No. _____ Discharge Specifications B.21.a. – f.. Any necessary construction, maintenance, or repairs shall be completed by **31 October**. By **15 November** of each year, the Discharger shall submit an annual report describing the results of the inspection and the repair measures implemented, including photographs of the problem and the repairs.

b. Storm Events

The Discharger shall inspect all precipitation, diversion, and drainage facilities for damage **within 7 days** following *major storm events*. A major storm event is any storm that causes or threatens to cause local flooding in the Jamestown - Sonora area. Necessary repairs shall be completed **within 30 days** of the inspection. The Discharger shall report any damage and subsequent repairs within 45 days of completion of the repairs, including photographs of the problem and the repairs.

The Discharger shall implement the above monitoring program on the effective date of this Order.

Ordered by: _____
PAMELA CREEDON, Executive Officer

_____
Date

RDA:20 April 2007